Amendments to the Claims

This listing of claims will replace all prior version, listings, of claims in the specification:

Listing of Claims:

- 1. (original) A method of treating myelodysplastic syndromes, lymphomas and leukemias, and solid tumors in a mammal which comprises treating the mammal in need of such treatment simultaneously, concurrently, separately or sequentially with pharmaceutically effective amounts of (a) a FLT-3 inhibitor, or a pharmaceutically acceptable salt or a prodrug thereof, and (b) a histone deacetylase inhibitor, or a pharmaceutically acceptable salt or a prodrug thereof.
- 2. (original) The method according to claim 1 for treating acute myeloid leukemia (AML).
- 3. (original) The method according to claim1, wherein the FLT-3 inhibitor is a staurosporine derivative.
- 4. (original) The method according to claim 3, wherein the staurosporine derivative is selected from the compounds of formula,

$$(R_1)_{m} \xrightarrow{g} B \\ (R_1)_{m} \xrightarrow{g} B \\ (R_2)_{n} \\ (R_3)_{m} \xrightarrow{g} B \\ (R_2)_{n} \\ (R_2)_{n} \\ (R_2)_{n} \\ (R_2)_{n} \\ (R_3)_{m} \xrightarrow{g} B \\ (R_2)_{n} \\ (R_2)_{n} \\ (R_2)_{n} \\ (R_3)_{m} \xrightarrow{g} B \\ (R_2)_{n} \\ (R_2)_{n} \\ (R_3)_{m} \xrightarrow{g} B \\ (R_2)_{n} \\ (R_2)_{n} \\ (R_3)_{m} \xrightarrow{g} B \\ (R_3)_{m} \xrightarrow{g} B \\ (R_2)_{n} \\ (R_3)_{m} \xrightarrow{g} B \\ (R_3)_{m} \xrightarrow{g} B$$

or

or

$$(R_1)_{mg} = 8 \times 7 \times 10^{6} \text{ NR}_5 \times 10^{6}$$

wherein R₁ and R₂, are, independently of one another, unsubstituted or substituted alkyl, hydrogen, halogen, hydroxy, etherified or esterified hydroxy, amino, mono- or disubstituted amino, cyano, nitro, mercapto, substituted mercapto, carboxy, esterified carboxy, carbamoyl, N-mono- or N,N-di-substituted carbamoyl, sulfo, substituted sulfonyl, aminosulfonyl or N-mono- or N,N-di-substituted aminosulfonyl;

n and m are, independently of one another, a number from and including 0 to and including 4;

n' and m' are, independently of one another, a number from and including 1 to and including 4;

 R_3 , R_4 , R_8 and R_{10} are, independently of one another, hydrogen, an aliphatic, carbocyclic, or carbocyclic-aliphatic radical with up to 29 carbon atoms in each case, a heterocyclic or heterocyclic-aliphatic radical with up to 20 carbon atoms in each case, and in each case up to 9 heteroatoms, an acyl with up to 30 carbon atoms, wherein R_4 may also be absent;

or R₃ is acyl with up to 30 carbon atoms and R₄ not an acyl;

p is 0 if R_4 is absent, or is 1 if R_3 and R_4 are both present and in each case are one of the aforementioned radicals;

R₅ is hydrogen, an aliphatic, carbocyclic, or carbocyclic-aliphatic radical with up to 29 carbon atoms in each case, or a heterocyclic or heterocyclic-aliphatic radical with up to 20 carbon atoms in each case, and in each case up to 9 heteroatoms, or acyl with up to 30 carbon atoms;

R₇, R₆ and R₉ are acyl or –(lower alkyl) –acyl, unsubstituted or substituted alkyl, hydrogen, halogen, hydroxy, etherified or esterified hydroxy, amino, mono- or disubstituted amino, cyano, nitro, mercapto, substituted mercapto, carboxy,carbonyl, carbonyldioxy, esterified carboxy, carbamoyl, N-mono- or N,N-di-substituted carbamoyl, sulfo, substituted sulfonyl, aminosulfonyl or N-mono- or N,N-di-substituted aminosulfonyl;

X stands for 2 hydrogen atoms; for 1 hydrogen atom and hydroxy; for O; or for hydrogen and lower alkoxy;

Z stands for hydrogen or lower alkyl;

and either the two bonds characterised by wavy lines are absent in ring A and replaced by 4 hydrogen atoms, and the two wavy lines in ring B each, together with the respective parallel bond, signify a double bond;

or the two bonds characterised by wavy lines are absent in ring B and replaced by a total of 4 hydrogen atoms, and the two wavy lines in ring A each, together with the respective parallel bond, signify a double bond;

or both in ring A and in ring B all of the 4 wavy bonds are absent and are replaced by a total of 8 hydrogen atoms;

or a salt thereof, if at least one salt-forming group is present.

5. (original) The method according to claim 3, wherein the staurosporine derivative is a staurosporin derivative of formula I,

$$(R_1)_m$$
 $(R_1)_m$
 $(R_2)_m$
 $(R_3)_m$
 $(R_4)_m$
 $(R_3)_m$
 $(R_4)_m$
 $(R_3)_m$
 $(R_4)_m$
 $(R_3)_m$
 $(R_4)_m$
 $(R_3)_m$
 $(R_4)_m$
 $(R_3)_m$

wherein

m and n are each 0;

 R_3 and R_4 are independently of each other

hydrogen,

lower alkyl unsubstituted or mono- or disubstituted, especially monosubstituted, by radicals selected independently of one another from carboxy; lower alkoxycarbonyl; and cyano; or

R₄ is hydrogen or -CH₃, and

R₃ is acyl of the subformula R°-CO, wherein R° is lower alkyl; amino-lower alkyl, wherein the amino group is present in unprotected form or is protected by lower alkoxycarbonyl; tetrahydropyranyloxy-lower alkyl; phenyl; imidazolyl-lower alkoxyphenyl; carboxyphenyl; lower alkoxycarbonylphenyl; halogen-lower alkylphenyl; imidazol-1-ylphenyl; pyrrolidino-lower alkylphenyl; piperazino-lower alkylphenyl; (4-lower alkylpiperazinomethyl)phenyl; morpholino-lower alkylphenyl; piperazinocarbonylphenyl; or (4-lower alkylpiperazino)phenyl;

or is acyl of the subformula R°-O-CO-, wherein R° is lower alkyl;

or is acyl of the subformula R°HN-C(=W)-, wherein W is oxygen and R° has the following meanings: morpholino-lower alkyl, phenyl, lower alkoxyphenyl, carboxyphenyl, or lower alkoxycarbonylphenyl;

or R_3 is lower alkylphenylsulfonyl, typically 4-toluenesulfonyl;

R₅ is hydrogen or lower alkyl,

X stands for 2 hydrogen atoms or for O;

Z is methyl or hydrogen;

or a salt thereof, if at least one salt-forming group is present.

6. (original) The method according to claim 3, wherein the staurosporine derivative is N-[(9S,10R,11R,13R)-2,3,10,11,12,13-hexahydro-10-methoxy-9-methyl-1-oxo-9,13-epoxy-1H,9H-

diindolo[1,2,3-gh:3',2',1'-lm]pyrrolo[3,4-j][1,7]benzodiazonin-11-yl]-*N*-methylbenzamide of the formula (VII):

or a salt thereof.

7. (original) The method according to claim 1, wherein the HDAI compound is a histone deacetylase inhibitor of formula (X)

HO
$$R_1$$
 R_2 R_3 R_4 R_5 R_5 R_5 R_5 R_5 R_5 R_5

wherein

R₁ is H, halo, or a straight chain C₁-C₆ alkyl;

 R_2 is selected from H, C_1 - C_{10} alkyl, C_4 – C_9 cycloalkyl, C_4 – C_9 heterocycloalkyl, C_4 – C_9 heterocycloalkylalkyl, cycloalkylalkyl, aryl, heteroaryl, arylalkyl, heteroarylalkyl, -(CH_2)_n $C(O)R_6$, -(CH_2)_n $OC(O)R_6$, amino acyl, HON-C(O)-CH=C(R_1)-aryl-alkyl- and - (CH_2)_n R_7 ;

 R_3 and R_4 are the same or different and independently H, C_1 - C_6 alkyl, acyl or acylamino, or R_3 and R_4 together with the carbon to which they are bound represent C=O, C=S, or C=NR₈, or R_2 together with the nitrogen to which it is bound and R_3 together with the carbon to which it is bound can form a C_4 - C_9 heterocycloalkyl, a heteroaryl, a

- polyheteroaryl, a non-aromatic polyheterocycle, or a mixed aryl and non-aryl polyheterocycle ring;
- R₅ is selected from H, C₁-C₆ alkyl, C₄ C₉ cycloalkyl, C₄ C₉ heterocycloalkyl, acyl, aryl, heteroaryl, arylalkyl, heteroarylalkyl, aromatic polycycle, non-aromatic polycycle, mixed aryl and non-aryl polycycle, polyheteroaryl, non-aromatic polyheterocycle, and mixed aryl and non-aryl polyheterocycle;
- n_1 , n_2 and n_3 are the same or different and independently selected from 0-6, when n_1 is 1-6, each carbon atom can be optionally and independently substituted with R_3 and/or R_4 ;
- X and Y are the same or different and independently selected from H, halo, C₁-C₄ alkyl, NO₂, C(O)R₁, OR₉, SR₉, CN, and NR₁₀R₁₁;
- R_6 is selected from H, C_1 - C_6 alkyl, C_4 C_9 cycloalkyl, C_4 C_9 heterocycloalkyl, cycloalkylalkyl, aryl, heteroaryl, arylalkyl, heteroarylalkyl, OR_{12} , and OR_{13} , arylalkyl, OR_{12} , and OR_{13} , arylalkyl, OR_{12} , and OR_{13} , arylalkyl, OR_{14} , arylalkyl, OR_{15} , and OR_{15} , and OR_{15} , arylalkyl, OR_{15} , and OR_{15} , and OR_{15} , arylalkyl, ary
- R₇ is selected from OR₁₅, SR₁₅, S(O)R₁₆, SO₂R₁₇, NR₁₃R₁₄, and NR₁₂SO₂R₆;
- R_8 is selected from H, OR_{15} , $NR_{13}R_{14}$, C_1 - C_6 alkyl, C_4 C_9 cycloalkyl, C_4 C_9 heterocycloalkyl, aryl, heteroaryl, arylalkyl, and heteroarylalkyl;
- R_9 is selected from $C_1 C_4$ alkyl and C(O)-alkyl;
- R₁₀ and R₁₁ are the same or different and independently selected from H, C₁-C₄ alkyl, and C(O)-alkyl;
- R_{12} is selected from H, C_1 - C_6 alkyl, C_4 C_9 cycloalkyl, C_4 C_9 heterocycloalkyl, C_4 C_9 heterocycloalkylalkyl, aryl, mixed aryl and non-aryl polycycle, heteroaryl, arylalkyl, and heteroarylalkyl;
- R_{13} and R_{14} are the same or different and independently selected from H, C_1 - C_6 alkyl, C_4 C_9 cycloalkyl, C_4 C_9 heterocycloalkyl, aryl, heteroaryl, arylalkyl, heteroarylalkyl, amino acyl, or R_{13} and R_{14} together with the nitrogen to which they are bound are C_4 C_9 heterocycloalkyl, heteroaryl, polyheteroaryl, non-aromatic polyheterocycle or mixed aryl and non-aryl polyheterocycle;
- R_{15} is selected from H, C_1 - C_6 alkyl, C_4 C_9 cycloalkyl, C_4 C_9 heterocycloalkyl, aryl, heteroaryl, arylalkyl, heteroarylalkyl and $(CH_2)_mZR_{12}$;
- R_{16} is selected from C_1 - C_6 alkyl, C_4 C_9 cycloalkyl, C_4 C_9 heterocycloalkyl, aryl, heteroaryl, polyheteroaryl, arylalkyl, heteroarylalkyl and $(CH_2)_m ZR_{12}$;
- R_{17} is selected from C_1 - C_6 alkyl, C_4 C_9 cycloalkyl, C_4 C_9 heterocycloalkyl, aryl, aromatic polycycle, heteroaryl, arylalkyl, heteroarylalkyl, polyheteroaryl and $NR_{13}R_{14}$;
- m is an integer selected from 0 to 6; and
- Z is selected from O, NR₁₃, S and S(O);
- or a pharmaceutically acceptable salt thereof.
- 8. (original) The method according to claim 7, wherein each of R₁, X, Y, R₃, and R₄ is H.

9. (original) The method according to claim 8, wherein one of n_2 and n_3 is zero and the other is 1.

10. (original) The method according to claim 9, wherein one of n_2 and n_3 is zero and the other is 1.

11. (original) The method according to claim 1, wherein the histone deacetylase inhibitor is a compound of the formula (Xa)

HO
$$R_2$$
 R_5 (Xa)

wherein

n₄ is 0-3,

 R_2 is selected from H, C_1 - C_6 alkyl, C_4 – C_9 cycloalkyl, C_4 – C_9 heterocycloalkyl, alkylcycloalkyl, aryl, heteroaryl, arylalkyl, heteroarylalkyl, -(CH_2)_nC(O)R₆, amino acyl and -(CH_2)_nR₇;

R₅' is heteroaryl, heteroarylalkyl, an aromatic polycycle, a non-aromatic polycycle, a mixed aryl and non-aryl polycycle, polyheteroaryl, or a mixed aryl and non-aryl polyheterocycle or a pharmaceutically acceptable salt thereof.

12. (original) The method according to claim 1, wherein the histone deacetylase inhibitor is a compound of the formula (Xb):

wherein

 R_2 ' is selected from H, C_1 - C_6 alkyl, C_4 - C_6 cycloalkyl, alkylcycloalkyl, and $(CH_2)_{2\cdot4}OR_{21}$ where R_{21} is H, methyl, ethyl, propyl, or isopropyl, and

R₅" is unsubstituted or substituted 1*H*-indol-3-yl, benzofuran-3-yl or quinolin-3-yl or a pharmaceutically acceptable salt thereof.

13. (original) The method according to claim 1, wherein the histone deacetylase inhibitor is a compound of the formula

(Xe)

or a pharmaceutically acceptable salt thereof.

14. (currently amended) The method according to any one of elaims 1 to 6 claim 1, wherein the histone deacetylase inhibitor is selected from the group consisting of N-hydroxy-3-[4-[[(2-hydroxyethyl)][2-(1H-indol-3-yl)ethyl]-amino]methyl]phenyl]-2E-2-propenamide, N-hydroxy-3-[4-[[[2-(1H-indol-3-yl)ethyl]-amino]methyl]phenyl]-2E-2-propenamide and N-hydroxy-3-[4-[[[2-(2-methyl-1*H*-indol-3-yl)-ethyl]-amino]methyl]phenyl]-2*E*-2-propenamide, or, in each case a pharmaceutically acceptable salt thereof.

15. (original) Use of a combination of (a) a FLT-3 inhibitor and (b) a histone deacetylase inhibitor (HDAI) for treating myelodysplastic syndromes, lymphomas and leukemias, and solid tumors.

16. (original) Use according to claim 15 for treating acute myeloid leukemia (AML), colorectal cancer (CRC) or non-small cell lung cancer (NSCLC).

17. (original) Use according to claim 15, wherein the FLT-3 inhibitor is -[(9S,10R,11R,13R)-2,3,10,11,12,13-hexahydro-10-methoxy-9-methyl-1-oxo-9,13-epoxy-1*H*,9*H*-diindolo[1,2,3-gh:3',2',1'-lm]pyrrolo[3,4-j][1,7]benzodiazonin-11-yl]-*N*-methylbenzamide of the formula (VII):

or a salt thereof and the HDAI is selected from the group consisting of N-hydroxy-3-[4-[[(2-hydroxyethyl)][2-(1H-indol-3-yl)ethyl]-amino]methyl]phenyl]-2E-2-propenamide, N-hydroxy-3-[4-[[[2-(1H-indol-3-yl)ethyl]-amino]methyl]phenyl]-2E-2-propenamide and N-hydroxy-3-[4-[[[2-(2-methyl-1H-indol-3-yl)-ethyl]-amino]methyl]phenyl]-2E-2-propenamide, or, in each case a pharmaceutically acceptable salt thereof.

18. (original) Use of a combination of (a) a FLT-3 inhibitor and (b) a histone deacetylase inhibitor (HDAI) for the preparation of a medicament for the treatment of myelodysplastic syndromes, lymphomas and leukemias and solid tumors.

19. (original) Use according to claim 18 for treating acute myeloid leukemia (AML), colorectal cancer (CRC) or non-small cell lung cancer (NSCLC).

20. (original) Use according to claim 18, wherein the FLT-3 inhibitor is -[(9S,10R,11R,13R)-2,3,10,11,12,13-hexahydro-10-methoxy-9-methyl-1-oxo-9,13-epoxy-1H,9H-diindolo[1,2,3-gh:3',2',1'-lm]pyrrolo[3,4-j][1,7]benzodiazonin-11-yl]-N-methylbenzamide of the formula (VII):

or a salt thereof and the HDAI is selected from the group consisting of N-hydroxy-3-[4-[[(2-hydroxyethyl)][2-(1H-indol-3-yl)ethyl]-amino]methyl]phenyl]-2E-2-propenamide, N-hydroxy-3-[4-[[[2-(1H-indol-3-yl)ethyl]-amino]methyl]phenyl]-2E-2-propenamide and N-hydroxy-3-[4-[[[2-(2-methyl-1H-indol-3-yl)-ethyl]-amino]methyl]phenyl]-2E-2-propenamide, or, in each case a pharmaceutically acceptable salt thereof.

- 21. (original) A pharmaceutical composition comprising (a) a FLT-3 inhibitor and (b) a histone deacetylase inhibitor for the treatment of myelodysplastic syndromes, lymphomas and leukemias and solid tumors.
- 22. (original) A pharmaceutical composition according to claim 21 for treating acute myeloid leukemia (AML), colorectal cancer (CRC) or non-small cell lung cancer (NSCLC).
- 23. (original) A pharmaceutical compositon according to claim 21, wherein the FLT-3 inhibitor is -[(9S,10R,11R,13R)-2,3,10,11,12,13-hexahydro-10-methoxy-9-methyl-1-oxo-9,13-epoxy-1*H*,9*H*-diindolo[1,2,3-gh:3',2',1'-lm]pyrrolo[3,4-j][1,7]benzodiazonin-11-yl]-*N*-methylbenzamide of the formula (VII):

or a salt thereof and the HDAI is selected from the group consisting of N-hydroxy-3-[4-[[(2-hydroxyethyl)][2-(1H-indol-3-yl)ethyl]-amino]methyl]phenyl]-2E-2-propenamide, N-hydroxy-3-[4-[[[2-(1H-indol-3-yl)ethyl]-amino]methyl]phenyl]-2E-2-propenamide and N-hydroxy-3-[4-[[[2-(2-methyl-1H-indol-3-yl)-ethyl]-amino]methyl]phenyl]-2E-2-propenamide, or, in each case a pharmaceutically acceptable salt thereof.